RAPID26®

Continuous Flow Gas Water Heater
26 Litre Series

Service Instructions

Rapid Continuous Flow Gas Water Heater
26 Litre Series

Service Instructions for:

Natural Gas	Propane Gas
RAPID R26N	RAPID R26P

This manual covers the normal servicing required on the above models.

KEY TO MODEL NUMBERS
R=RAPID
26 = 26LPM @ 25ºC temperature rise.
N = Natural Gas
P = PROPANE Gas (Australia only, not universal LPG)

26LPM CONTINUOUS FLOW HOT WATER SERVICE MANUAL

DESCRIPTION OF OPERATION

The Rapid 26 range of Continuous Flow Gas Hot Water Services (CFGHW) are Gas fired Forced combustion hot water heating appliances.

The unit is powered and active at all times. When hot water is required, signalled by turning on a hot tap in the home (to the desired **flow** rate), the unit senses flow via the flow meter, and after some safety **checks** initiates an **ignition** cycle.

IMPORTANT: THE WATER FLOW RATE WILL BE AUTOMATICALLY REDUCED MOMENTARILY TO ENSURE FAST HEAT UP AND TO MINIMISE WATER WASTAGE. When the water approaches the correct temperature the unit will then resume the desired flow.

If there is air in the line or for some reason ignition does not occur, the controller attempts again for 5 more attempts. It will then **lock out**. The unit is reset only when the water is turned off for 2 seconds and then back on again. **Switching the power off and on again, without interrupting the water flow, will NOT reset the unit.** Only when the tap is closed and opened again will the ignition cycle be re-started.

After a successful ignition attempt, and immediately the unit senses flame at the burners, the control unit (ECU) calculates how much gas is needed to ensure that the water is at the correct temperature for that flow rate. It then switches on 1, 2 or 3 packs of burners using 3 solenoids provided. As well the ECU unit polls the outlet temperature sensor many times per second and fine tunes the gas flow via a gas modulating valve. This valve is the blue coil on top of the main gas control valve. The unit adjusts the gas to suit the water flow and the desired temperature, thereby supplying water at the correct temperature.

The unit also reacts to changes in flow rate, (e.g. another tap being turned on) and starts to re-adjust the temperature almost immediately.

If the desired temperature cannot be attained because the user has opened water taps too far or has too many on at one time, (Excessive flow rate) the unit will adjust the water flow down internally so that the desired temperature will be maintained. (This is called **Temperature Priority**).

The unit also includes a **safety shut down if the water gets too hot**, which requires a water flow shutdown and reopening of a tap to reset. This fault however is not common and indicates a problem with the unit. If it recurs call a service agent to correct the fault.

Also included is a safety shutdown and re-ignition if the sensor loses flame contact during use. It repeats this 5 times and then locks out. Reset is again by a 2 second interruption to water flow.(Turn tap off and then on after 2 seconds.

COMPONENTS DESCRIPTION

GAS TRAIN AND CIRCUIT

1. **GAS VALVE.** This valve is a SIT Components 845 Sigma model with 2 main solenoids and an additional (Blue, low voltage)) Modulating Valve to adjust gas rate for fine adjustment. The Rapid unit has a special inlet fitting provided with a gas test point that is fitted outside the case underneath the unit to allow for easy checking of the inlet gas pressure. The gas outlet (burner) pressure is easily read using the gas manifold test point provided on the front of the burner box assembly.
2. **VALVE TO BURNER PIPE.** This is a short copper pipe formed to transmit gas from the gas valve outlet to the gas manifold which is integrated into the burner box assembly. The pipe uses flat rubber washers at each end for gas sealing.
3. **THE GAS MANIFOLD** is a cast component that has a stamped plated steel cover and gasket and distributes gas to 3 separate Solenoids (Fig A Item 3). These solenoids deliver gas to the packs of 3, 5 or 9 of the 17 burners, plus a combination giving 3,5,8, 12 and 17 burners. The solenoids, under the control of the main electronic controller, (ECU Fig A) allow rough cut supply of gas to approximately suit the desired temperature and water flow. The modulating valve as described in point 1 above, is also under the control of the ECU and allows fine tuning of the gas pressure at the burner injectors to precisely match the desired load. A multi stepped gas rate is therefore provided. There is provided a gas pressure test point on the manifold for checking of burner gas pressure.
4. **BURNERS** There are 17 small burners in the unit and these are made of stainless steel and would normally not need servicing.
5. **GAS INJECTORS** are located in the cast alloy manifold and can be accessed after removal of several screws. See instructions.
6. **HEAT EXCHANGER** The hot gases from the burner array pass vertically upward through a box type copper heat exchanger which has helical cold water pipe soldered to the outside of it. This scavenges heat and supplies pre-warmed water to the main finned heat exchanger. Across the top of this box there is a finned copper serpentine heat exchanger that takes most of the energy from the flue gases and transfers it to the water flowing in the pipes, prior to the cooled gases being exhausted from the stainless steel flue outlet.

WATER CIRCUIT

7. **INLET WATER FITTING.** This fitting is connected to the cold inlet mains water (or the warm outlet of a Solar Pre-heater tank. (70C model only.)) It has a screw off combination filter/drain fitting that incorporates a stainless gauze water filter. Only under extreme conditions is this filter expected to become blocked. The drain is useful for draining the unit if it is to be left in a cold area with no power available. (Freeze Protection.) This fitting also has pockets for the inlet water temperature sensor and a small heating resistor for freeze protection.

8. **INLET WATER VALVE.** This valve is located just inside the case bottom and is an extension of the inlet water fitting. It is electrically controlled by the ECU to adjust the flow rate of the water so that the desired temperature can be achieved even if the user has fully opened up several taps.(Thereby exceeding the possible heat input from the unit.) The inlet water valve also incorporates the flow sensor turbine that allows the ECU to detect water flow above 3LPM and initiate the ignition cycle. The flow meter also provides information to the ECU to finely adjust the gas to give the desired temperatures. The outlet of this valve is connected to the inlet pipe of the copper heat exchanger described above.
9. **HEAT EXCHANGER.** This as described above in (6).
10. **OUTLET WATER FITTING.** This is located under the lower left hand side of the heater and incorporates a pressure relief valve and drain assembly. It connects with the outlet pipe of the heat exchanger and is connected through the case to the delivery pipe into the house.

ELECTRICAL COMPONENTS

11. **ECU.** This is located at the lower left hand front of the unit and has all the electronics needed to control the gas and electrical components to ensure ignition, temperature and safety aspect all perform as designed. The electronic components should never be touched by hand as static electricity can destroy the electronics.
12. **SENSORS.** Water TEMPERATURE. There are 2 temperature sensors, one in the **incoming water valve and one in the outgoing water fitting**. These are wired back and plug into the PCB. Each has an O-ring and small screw bracket.
13. **TRANSFORMER.** MAINS POWER SUPPLY. There is provided a mains power transformer to supply all the electrical loads required for the various components.
14. **PRESSURE SWITCH.** Fan Proving. This is located at the lower RH end of the case and is connected via a silicone rubber tube to the fan outlet. This switch senses fan air pressure and allows the ECU to ignite the unit in the knowledge that the fan is operational. The other side of the pressure switch is connected to a short hose that connects with the air inlet vents to balance the air switch under wind conditions.
15. **FAN (COMBUSTION).** This is approx 100 mm diameter and is located behind the ECU PCB. It is mounted from the bottom of the burner box assembly. The fan assembly can only be removed after the heat exchanger is removed. However, **the fan motor and fan wheel component can be removed** from the fan scroll by removing 3 screws visible on the front of the fan assembly, saving much disassembly to change a fan over..
16. **OVER-TEMPERATURE CUT OUT.** This is fitted at the top RH side of the heat exchanger on the pipe work and is of the auto reset type. This will only open circuit if the main ECU fails to operate properly. **WARNING: THIS ITEM IS CONNECTED TO 240V MAINS POWER AT ALL TIMES.**

17. **ANTIFREEZE.** This is an array of ceramic power resistors IN SERIES which are clipped onto the water carrying pipes or are imbedded into the water valves and fittings. They are all connected with fibreglass wiring and are 240V MAINS POWERED AT ALL TIMES, providing the unit is plugged in and power switch is on.

    The frost sensor is attached to the outlet of the heat exchanger at the top LH side of the unit. It is recommended that power be left on to this unit even when the home is vacant, (such as at holiday time) to ensure that the risk of damage from frozen pipes and components is minimised.

    CAUTION: Power must be applied at all times for this heater circuit to effectively protect the unit in frosty conditions.

18. **DRAIN** The unit can be drained (if it is desired to switch off all power to the unit)by removing the **inlet water filter AND the outlet pressure relief valve** on the hot water outlet fitting.

19. **THERMAL FUSE.** A thermal fuse is fitted on the rear of the heat exchanger in a fiberglass sleeve. This must only be replaced with a genuine part from Alliance.

SERVICING THE UNIT

DISASSEMBLY OR REMOVAL OF COMPONENTS.

CAUTION: ENSURE ALL WATER, POWER AND GAS SUPPLIES ARE ISOLATED PRIOR TO REMOVING FRONT COVER.

FRONT COVER. This is removed after removal of 2 screws at the top flange and 2 at the bottom flange. The cover lifts straight off but care must be taken to not break or lose the thick rubber gasket from around the flue spigot at the top. If it comes off retain it and ensure that it is refitted upon re-assembly. A balance tube is fitted between the pressure switch and the front cover, care must be taken to replace this tube if disconnected.

CAUTION: The unit will NOT perform correctly without the front cover and balance pipe in place.

MAIN CONTROL PCB. Remove all plugs, wires and ignition cable and remove 2 screws from underneath the unit and the PCB, in its box ,will come out of the unit. All plugs are polarised and are different so re-assembly is straightforward. The cold water sensor and hot water sensors are combined into a 4 pin plug to avoid errors. The individual sensors are connected to the 4 way plug with 2 polarised in line connectors with different polarity to avoid mix ups.

TRANSFORMER. The main power transformer is secured by 2 screws through the case. All low voltage connections are already disconnected but 240V connections must be disconnected prior to removal/replacement. Refit unit in reverse order ensuring all connections are correctly made.

INJECTORS. If access to the gas injectors is required the gas manifold must be removed. **DO NOT REMOVE THE FRONT PLATED STEEL COVER AS THIS IS PART OF THE GAS TRAIN.** Note position of wiring to the 3 solenoids and disconnect. Undo the main brass nut at the manifold end of the valve to burner pipe and ensure that the flat washer is not lost. Remove the gas manifold taking care to not damage the rubber sealing strips that seal the manifold to the burner box. Re-assemble to burner box in reverse order. **ENSURE THAT IGNITION WIRE AND FLAME SENSOR WIRES ARE STILL CONNECTED. Re-connect solenoid wires.**

MAIN GAS VALVE. ENSURE GAS IS OFF at the isolating valve. Unplug 2 wires from the blue modulating coil on the front of the gas valve. These are not polarised and can go on either way. Unplug the main wiring connection from the gas valve body. Remove the Union from the gas inlet isolating valve and remove the combination gas fitting /gas pressure test point. Remove 2 screws adjacent to the inlet gas spigot. Remove the valve to burner pipe ensuring that the flat rubber gasket is not lost. Remove Gas valve.

Reassemble in reverse order ensuring that all gaskets and sealing rings are in place and all wiring connections are well made. Adjust gas valve settings as per instructions below.

IGNITION ELECTRODE AND FLAME SENSOR. These are located on a small plate at the front of the combustion chamber. Remove the thick ignition wire from the electrode and from the ignition coil on the PCB to prevent excessive strain on the wiring connection. Remove the flame sensor wire from the other electrode. Mark or otherwise ensure that the wires go back onto the correct electrode when re-assembled. The ignition lead is on the left looking at the unit. Remove the single screw at the centre of the plate and gently remove the plate, ceramic felt gasket, the 2 ceramic electrode holders and the electrodes from the unit.

THE HOLDERS ARE KEYED AND CAN ONLY BE RE-FITTED ONE WAY. TAKE CARE TO ASSEMBLE THE ELECTRODES CORRECTLY.

Re-assemble and screw firmly into place. Check gasket and do NOT over-tighten.

WATER INLET FITTING. This item should not need to be removed except where the inlet water valve needs to be replaced. The fitting is removed (after disconnecting the water supply pipe,) by removing 2 screws through the flange on the fitting from underneath the unit. The fitting will then separate from the inlet valve inside the unit. **DO NOT LOSE THE "O" RING or damage the sensor.**

WATER INLET VALVE. This incorporates the motorised valve and the water flow sensing turbine. After removal of the inlet water fitting, undo 2 screws from underneath the unit case and also 2 screws that retain the valve to heat exchanger cold water pipe. The valve should then lift out. Take care to not lose the "O" Ring. The cold water sensor also fits into the side of this valve with a screw and small plate. It has a mall O ring to seal.

WATER OUTLET FITTING. This fitting is removed by removing the 2 screws from under the unit and undoing the brass nut that retains the hot water pipe from the heat exchanger. Do not lose the washer. The pipe can then be pushed backwards out of the way and the fitting removed. Note that this fitting also has a pocket for a frost protection resistor and also water outlet sensor. A single screw and bracket hold both the sensor and the heater.

FAN, COMBUSTION. The fan motor and fan blade of this component can be removed by first removing the 3 screws that hold the motor to the fan scroll. This is the most convenient way to replace the fan if faulty. The fan scroll itself can only be removed after the heat exchanger and burner box assembly is removed.

HEAT EXCHANGER (AND BURNER BOX) ASSEMBLY. This is removed as a complete assembly. Disconnect/ Unplug all connections and remove PCB by removing 2 screws from under the outer case , Disconnect and remove valve to burner pipe, transformer, and disconnect overtemperature sensor on top RH corner, disconnect anti frost connections from mains terminal block, and water connections from Cold inlet water valve and Hot water outlet fitting. The frost protection heaters and thermostat (top LH side) will come out still clipped to the pipework of the heat exchanger.

CAUTION: Mains power is connected to the antifreeze protection circuit at any time power is connected to unit.

Remove 4 mounting screws from the brackets under the gas manifold and 4 screws from the brackets either side of the flue outlet at the top, and lift heat exchanger assembly free of the case. The fan scroll and fan motor will came out as part of this assembly.

The heat exchanger is not to be serviced separate from the burner box. This component is only available as a factory sealed and assembled unit for safety reasons.

DIAGNOSING FAULTS.

The most common complaint will be "NO HOT WATER".

NOTE: THE UNIT WILL NOT OPERATE CORRECTLY UNLESS ADEQUATE GAS AND WATER PRESSURE IS AVAILABLE.

WITH ALL GAS APPLIANCES IN THE HOME RUNNING AT MAXIMUM THERE MUST BE adequate pressure at the ALLIANCE UNIT INLET GAS PRESSURE TEST POINT at the gas connection to the unit.

The required pressure is 1kPa- 3kPa for natural gas, and 2.75kpa-3kPa for Propane Gas.

SERVICEMAN: USE A MANOMETER TO CHECK THIS REQUIREMENT FIRST. There is provided a gas inlet pressure test point on the special fitting provided at the gas inlet connection external to the outer case bottom.

LOW GAS PRESSURE IS A MAJOR SOURCE OF COMPLAINTS REGARDING NO HOT WATER. If insufficient pressure is available, advise the customer to contact the installer. The supply utility will generally upgrade the meter but undersize piping will be the owner's responsibility.

ALLIANCE APPLIANCES WILL NOT BE LIABLE FOR ANY WARRANTY/ SERVICE COSTS IF GAS PRESSURE IS FOUND TO BE INADEQUATE.

In addition, in the event of **"NO HOT WATER"**, it is imperative to check if **POWER** is present at the power outlet, GAS is available and is of adequate pressure and that there is a good supply of WATER flowing from a hot tap in the house. **(3 Litres Per Minute MINIMUM.)**

SYMPTOM	POSSIBLE CAUSE	HOW TO DIAGNOSE	REMEDY
No Hot Water	No Power	Check power outlet with meter.	Correct power supply
No Hot Water	No Gas		Correct Gas supply to Specification
No Hot Water	No Water Supply		Correct water supply to the specifications.

After checking all of these requirements, attempt to start unit again.

If unit does not respond at all (dead) it indicates that there is a power disconnect somewhere. If the unit tries to start, (e.g. fan runs, igniter attempts to spark etc. but then shuts down it indicates that the Power is On, and the PCB/ECU is operating but either the gas is not available, or there is air in the lines. Purge the line again and/or retry. IF not successful, it will become necessary to access the inside of the unit.

1. Switch off power
2. Remove front cover. Be careful to disengage the pressure switch balance hose from the front cover.

3. Switch power ON. **WARNING: SOME COMPONENTS ARE AT 240V.**
4. Check for power at the PCB by observing if there are any LEDS illuminated. If not, check fuse on PCB lower LH side. Check 240V overtemperature cutout at top RH corner. This is auto reset and may have reset already. If LEDS are not on and fuse is OK then either a connection from the transformer is disconnected or the transformer is unserviceable.-Test and replace.
5. If LEDS are visible, (cover off) turn on a hot tap and allow unit to attempt to start. If it does not start, observe **amber** flashing LED at top centre of PCB. The LED will flash on and off in a series of either 1 flash or 2 or 3 etc. Cross check with the chart below to help isolate the fault.

	FLASHES	
No Flow	1	Flow between 0-2LPM
Temp error inlet	2	Open/short circuit sensor
Temp error outlet	3	Open/short circuit sensor
Pressure Switch Fault	4	If there is FAN ON and pressure switch didn't activate
No Flame	5	No Flame Signal received after start
No Tacho	6	No fan tacho signal received
Overtemp	7	If temperature goes over set temp +20'C

ACTIONS – FAULT CODES

1 FLASH- NO WATER FLOW.

Check that water is flowing at hot tap(s) at more than 2.5LPM. If not check water supply at inlet to heater by cracking water inlet union and ensuring that there is adequate water to the unit. If so, check inlet water filter/strainer in the cold water inlet water fitting. If clean, check that water valve connection to PCB is OK. If not replace inlet water modulator valve. The only other restriction in the system could be that the heat exchanger is blocked due to water solids deposits. Flow check the heat exchanger Min flow should be 3LPM with one tap opened.. If blocked, clean or replace.

2 FLASHES – TEMPERATURE ERROR- INLET.

This indicates that the inlet temperature sensor in the inlet water valve fitting is either open circuit, short circuit or not plugged in to the PCB or is plugged into the incorrect receptacle on the PCB. Check and/or replace as required.

3 FLASHES- TEMPERATURE ERROR- OUTLET

This indicates that the outlet temperature sensor in the outlet water valve fitting is either open circuit, short circuit or not plugged in to the PCB or is plugged into the incorrect receptacle on the PCB. Check and/or replace as required.

4 FLASHES - PRESSURE SWITCH/FAN.

If the fan runs this indicates that the pressure switch is faulty. Check if silicone tube from Fan to pressure switch is in place and is not leaking. If the fan does not run it indicates that the pressure switch is already on and is faulty. Replace pressure switch and retest, if fan does not start check connections and replace fan if necessary.

5 FLASHES- NO FLAME DETECTED.

Look through viewing port and see if ignition is successful. If flames are visible briefly then extinguishes the flame sensor cable is most likely not connected to the flame sensor or the PCB. If no flames or ignition attempt check ignition wire and listen for sparking at the electrode. Check gas supply. Replace PCB if necessary as ignition module is integrated into the PCB.

6 FLASHES – NO TACHO.

Indicates no fan on start up or loss of fan speed. Check PCB fuse, check fan plug on PCB. Replace fan as required.

7 FLASHES- OVERTEMPERATURE.

This indicates that the PCB has detected an overtemperature condition approx 20ºC hotter than the desired setting. It does NOT indicate that the 240V main overtemperature cut out has open circuited. This would NOT indicate a faulty sensor as these are covered in 2 & 3 above.

If unit runs at a flow of say 5-10LPM, allow it to settle down and record temperature at nearest outlet. If it runs over the set temperature for a length of time it should cut out again when the outlet reaches 20ºC over the set point, but if it continues passed that ECU controlled over temperature control, the unit will cut out on the 240V cut-out top RHS. It is imperative to check if this happens, as the 240V cutout would have reset in the time between receiving the service call and the serviceman arriving to service the unit. If it cuts out and flashes 7 times, the outlet sensor and/or PCB should be replaced. (Over temperature of 20ºC will cut out the unit but it can be reset by turning the WATER off for 2 seconds and then back on. It CANNOT be reset by interrupting power and NOT interrupting the water flow as well.)

OTHER IMPORTANT POINTS

BURNER PRESSURE ADJUSTMENT

NOTE: IT IS HIGHLY UNLIKELY THAT THIS UNIT WILL NEED ADJUSTMENT IF THE SUPPLY PRESSURE IS WITHIN THE STATED LIMITS. DO NOT ADJUST THE BURNER PRESSURE TO COMPENSATE FOR LOW INLET PRESSURE. ENSURE THAT INLET PRESSURE IS TESTED AT THE TEST POINT PROVIDED AT THE INLET CONNECTION AND ENSURE THAT IT IS CHECKED WITH ALL OTHER GAS APPLIANCES OPERATING AT MAX.

NOTE: ALLIANCE APPLIANCES AUSTRALIA WILL NOT BE RESPONSIBLE FOR ANY SERVICE COSTS IF THIS GAS SUPPLY IS FOUND TO BE OUTSIDE STATED LIMITS.

IF THE UNIT IS NOT ABLE TO BE MADE OPERABLE BY EXERCISING ALL OF THE ABOVE PLEASE CONTACT ALLIANCE APPLIANCES Pty Ltd on 0438397143

The burner pressure test point is located on the main gas valve adjacent to the gas outlet.

NOTE: THE UNIT MUST BE SWITCHED TO TEST MODE TO CANCEL THE WATER MODULATION TO HELP ENSURE THAT HIGH FIRE GAS PRESSURE IS MAXIMUM. The test switch is located as shown on PCB Board Image on Page 14. To operate, power the unit on. No water flow. Allow 10 secs of power on. Press the test switch for at least 1 second. This will not allow the unit to modulate the water flow down. After checking, turn the water off and this test mode will be cancelled. The water flow will be maximum but if less than the unit capacity, it may still not allow max gas to be applied to the unit. If this is the case you can only get a quick sample period of max gas when the unit starts from cold. Run cold water through the unit with power off to cool unit to enable startup with max gas again. You will need to press switch for 1 second each time you want to test pressure.

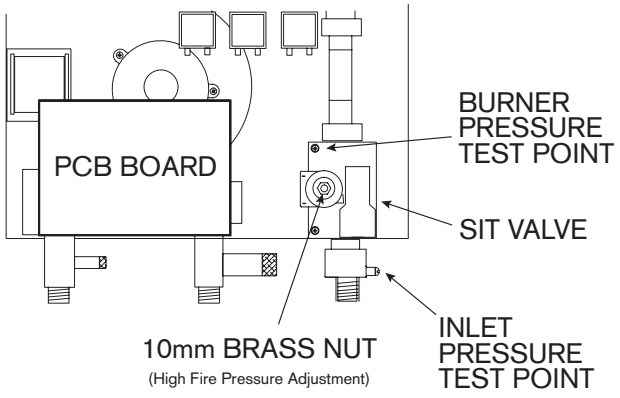
REMOVE PLASTIC COVER AND RETAIN IT AS IT MUST BE REPLACED.

The burner high fire pressure adjustment is a 10mm brass nut as shown.

MANOMETER TUBE MUST BE ROUTED THROUGH GROMMET IN BASE OF UNIT AND FRONT COVER MUST BE IN PLACE FOR READING TO BE ACCURATE.

To increase pressure turn nut clockwise and to reduce pressure turn nut anticlockwise.

NOTE: THE CLEAR PLASTIC COVER OVER THE ADJUSTMENT SCREWS MUST BE REPLACED OR THE UNIT WILL NOT OPERATE PROPERLY.



26L GAS PRESSURE TEST POINTS

TEMPERATURE ADJUSTMENTS. (By licensed installers only)

The Rapid 26 can be incrementally preset to temperatures between 50ºC to 74ºC.

When pre-set to 50ºC there is a range of adjustment available to the installer to ensure that the outlet nearest the heater can be increased to make up for pipe losses.

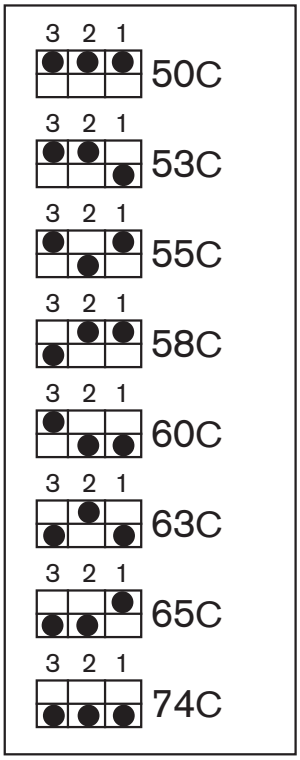
NOTE: IT IS THE INSTALLER'S RESPONSIBILITY TO ENSURE THAT ANY OUTLET CONNECTED TO THIS UNIT CANNOT DELIVER WATER OVER 50C .

SELECTION OF TEMPERATURE AT 50ºC

THIS ADJUSTMENT IS PROVIDED TO ALLOW THE INSTALLER TO ENSURE THAT 50ºC WATER IS AVAILABLE.

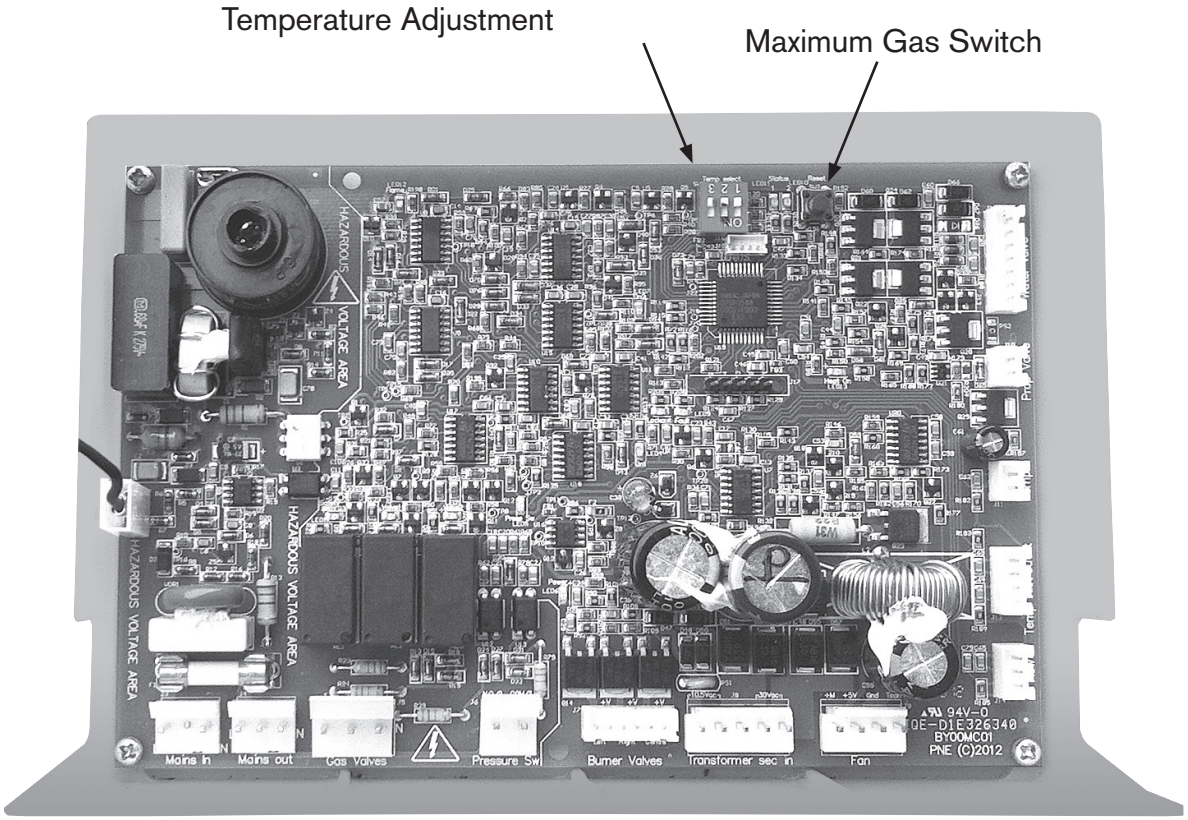
NOTE: IT IS THE RESPONSIBILITY OF THE INSTALLER TO ENSURE THAT NO HOT WATER OUTLET ATTACHED TO THIS VERSION CAN DELIVER WATER IN EXCESS OF 50ºC DUE TO THE RISK OF SCALDING, ESPECIALLY OF THE ELDERLY, CHILDREN AND THE INFIRM.

NOTE: THE POWER MUST BE TURNED OFF PRIOR TO CHANGING THIS SET OF SWITCHES.



Connections. Check all visible connections and plugs on PCB, especially the ignition spark cable (8mm spark plug type cable) and the flame sensing cable, both of which run from the PCB to the ignition electrodes.

NOTE: THE SPARK CABLE IS FITTED TO THE LEFT HAND SIDE ELECTRODE AND THE FLAME SENSOR CABLE TO THE RIGHT HAND SIDE ELECTRODE.

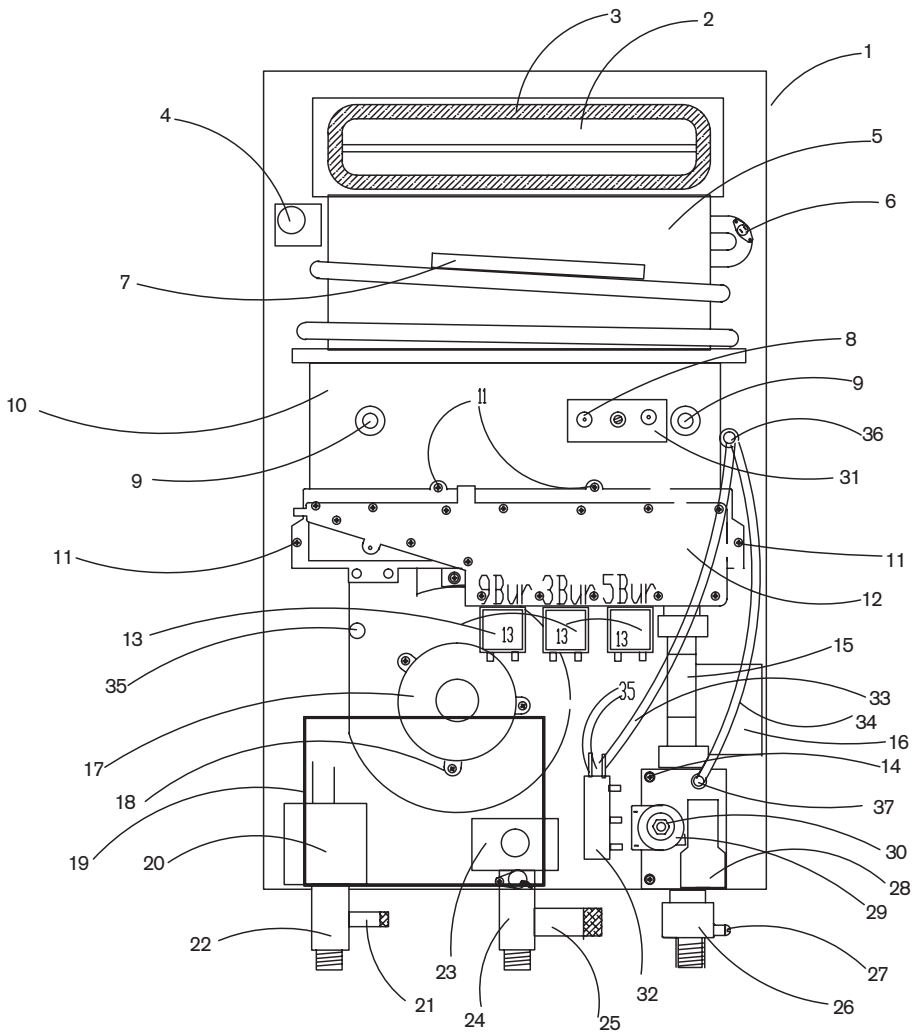


PCB Board: temperature switches and max gas push button.

The maximum gas button prevents the unit from decreasing the water flow and gas rate. Push once for about 1.0 second, and it will prevent water modulation until the water is turned off . It can only hold gas at max for a few seconds. It reverts to normal when flow rate is zero.

It is used to ensure maximum water flow to enable maximum gas pressure to be monitored and reset if required.

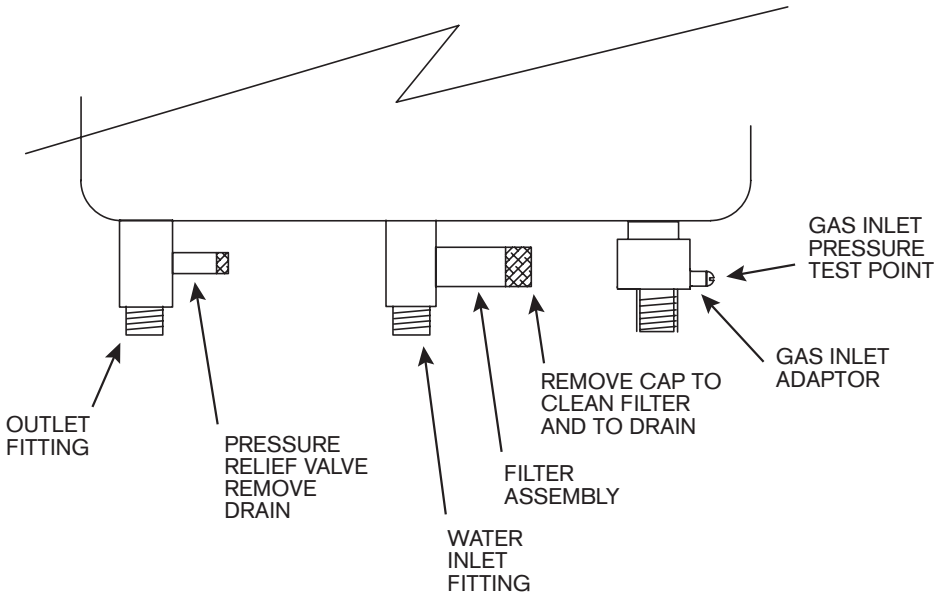
If not pushed the unit will decrease gas pressure and give an incorrect reading on manometer.



No.	Component
1	Case - Outer
2	Outlet - Flue
3	Gasket - Flue Outlet
4	Thermostat - Frost protect
5	Heat Exchanger - Main
6	Thermostat - Overtemp
7	Heater - Frost Protection
8	Electrode - Spark Ignition
9	Window - Inspection
10	Burner Box
11	Screw - Manifold Attachment
12	Cover - Gas Chest
13	Solenoid(s) - Burner Pressure Test
14	Spiggot - Burner Pressure Test
15	Pipe - Valve to Burner
16	Transformer - Power Supply
17	Motor Assembly - Comb Fan
18	Screw - Fan Motor Retaining
19	PCB - Control (Outline)

No.	Component
20	Valve - Water Outlet Assembly
21	Valve - Pressure Relief and Drain
22	Connection - Hot Water Out
23	Valve - Water Control and Flow Sensing
24	Connection - Cold Water Inlet
25	Plug - Outlet Filter and Drain
26	Fittings - Gas Inlet Special
27	Spiggot - Gas Inlet Pressure test
28	Valve - Gas Main Control
29	Valve - Gas Modulation (Blue Coil)
30	NUT - Burner Pressure Adjustment
31	Electrode - Flame Sensing
32	Pressur Switch - Air Proving
33	Hose - Pressure Switch Comb Chamber
34	Hose - Combustion Chamber Compensation
35	Hose Front Cover Compensation
36	Pressure Tapping - Combustion Chamber
37	Pressure Tapping - Gas Valve Compensation

WATER CONNECTION, FILTER AND DRAIN DETAILS ALL MODELS



ALLIANCE®
WATER HEATERS

RAPID26®

ALLIANCE®
APPLIANCES AUSTRALIA

83 JELLS ROAD WHEELERS HILL VIC 3150
T 0438 397 143 **E** geoff@allianceappliances.com.au
www.allianceappliances.com.au